LEHIGH CO
B. BRAUN BIOTECH
CORRESPONDENCE
PAD #987378494

Pennsylvania Department of Environmental Protection

2 Public Square
Wilkes-Barre, PA 18711-0790
July 21, 1998

Northeast Regional Office 717-826-2516

Ms. Lisa M. Millington
Environmental Affairs Assistant
B. Braun Biotech, Inc.
999 Postal Road
Allentown, PA 18103

Re: Hazardous Waste Permit-by-Rule
Operation of a Captive Neutralization Treatment Unit
B. Braun Biotech, Inc.
PAD#987378494
Hanover Township, Lehigh County

Dear Ms. Millington:

On July 6, 1998, the Department received your submittal requesting an approval to operate a captive wastewater treatment unit at your facility under the Hazardous Waste Regulations, Title 25, Section 265.433. In addition, the Department understands that a generator treatment unit operated under Title 25, Section 265.435 is also located at this facility site. The Department had previously conducted a facility site visit, reviewed your submitted material, and has determined that these units qualify for permit-by-rule contingent on the following conditions:

1. B. Braun Biotech, Inc. shall comply with all pertinent regulations and Title 25, Section 265.433 and 265.435. Any changes in the Hazardous Waste Regulations or changes in your manufacturing or treatment process would require a re-evaluation.

2. The Department may require B. Braun Biotech, Inc. to apply for a permit if the facility does not comply with all pertinent conditions of 25 Pa. Code 265.433 and 265.435 or is conducting in an activity that harms or presents a threat to harm human health or the environment.

If you have any questions regarding this matter, please contact me at the above address or telephone number.

Sincerely,

William Tomayko

William Tomayko
Program Manager
Waste Management Program

bcc: W. Tomayko/WM File
J. Lehman/S. Puzio
R. Lewis/C. Scheidler
T. Polliard/FIX

WT:CS:kab
WP: W4-2638.doc
D: 7/10/98
T(D): 7/13/98
R(F): 7/21/98

Charlie CLL
Tracey

B. Braun Biotech Inc. USA

999 Postal Road • Allentown, PA 18103 USA

Telephone: (610) 266-6262
Toll-Free: (800) 258-9000

Telefax: (610) 266-9319

May 19, 1998

Mr. Robert K. Lewis RKL 7/7/98
Department of Environmental Protection (DEP)
Facility Section Supervisor, Northeast Regional Office
2 Public Square
Wilkes Barre, Pa 18711-0790

Dear Mr. Lewis,

The local DEP office has brought to B. Braun Biotech's attention, that B. Braun Biotech is required to apply for a Permit By Rule because of the neutralization process of electropolishing rinse water (25 PA CODE 265.433—Neutralization Treatment Units). A schematic and a description of the neutralization process is herein, per your request.

The neutralization waste is hazardous (40 CFR 261.10) because of the corrositivity of the mixture (10 % sulfuric /phosphoric acid to 90% water). Before neutralization, the mixture has a pH of 1.0 – 2.0. The rinse water mixture is then treated with sodium hydroxide to establish and maintain a pH of 7.0. Once the pH is adjusted, four to five pounds of RM 10 (clay polymer) is added to the mixture which hastens and encapsulates the metal. Once precipitation has occurred, the clean water is filtered through filter paper and then pumped through a 55-gallon carbon filter. The water is then reused in the rinsing process. The sludge is collected in 55 gallons drums and is taken off site as a non-hazardous waste.

The steps undertaken in the compliance with 25 PA CODE 265.433—Neutralization Treatment Units include the following: (1) a NPDES (National Pollutant Discharge Elimination System) permit with the Borough of Catasauqua (265.433), (2) an EPA ID number with the EPA (264.11), (3) The neutralization unit is located in the building within the electropolishing area (264.14), (4) all operating records and information regarding this unit are maintained at the facility (264.73), and (5) any additional reports are filled, if necessary (264.77).

Kindly confirm acknowledgement of this letter and acceptance of our application of the Permit By Rule Neutralization of Treatment Units (25 PA CODE 265.433). If you have any questions regarding this matter, please feel free to contact me at (610) 266-0500.

Sincerely,

Lisa M. Millington
Environmental Affairs Assistant

cc: L. Lucas
T. Ronca
R. Szilagyi
B. Paxton

RM-10® CHEMICAL FLOCCULANTS

RM-10®

RM-10® flocculants are clay based powder or granular chemicals that will remove emulsified oils, suspended solids, phosphates and metals from water. In cases where an oil emulsion concentration is higher than 2%, a liquid pre-treatment chemical (RM-10 OF5) is added to the wastewater to partially break the emulsion, which causes most of the oil to float to the surface for skimming. Once the oil emulsion is reduced to a 2% concentration or less, a single powder or granular reactant is added and mixed with the wastewater. Almost instantly, the emulsion is broken and the oil and other contaminants are scavenged and fixated onto a large floc through a process of flocculation and encapsulation. The result is a sludge cake which is suitable for disposal in a non-hazardous industrial landfill. The remaining treated water is sufficiently free of oil, metals and suspended solids, and in most cases can be discharged into a municipal sewer or recycled.

ENCAPSULATION

Encapsulation is a process of waste fixation. The RM-10® chemical flocculants coat coagulated droplets of oil and emulsions with a webbing that permanently traps the contaminants. The webbing forms through a chemical reaction just after flocculation. The floc starts a pozzolanic curing process which improves with age.

This encapsulation process produces a , non-leachable sludge that can be disposed of in non-hazardous industrial landfills. This type of disposal costs three to five times less than disposing of concentrates or leachable sludges in hazardous waste landfills, and it eliminates the possibility of groundwater contamination. To verify non-leachability a TCLP test is recommended for each sludge produced by our process.

Once the reaction tank fill cycle is complete, the mixer will be turned on and allowed to mix for 30 seconds. The RM-10 is pre weighed and added accordingly. The RM-10 chemistry is then allowed to flocculate and remove the contaminants from the wastestream, typically in one to five minutes. Additional, mixing and/or addition times maybe needed to fully develop the floc and remove the contaminants. Once completed, the floc is allowed to settle for one or two minutes. At this time, the reaction tank is now ready for liquid solids separation.

Liquid Solids Separation

Once the settling time is complete, the clean water valve can be opened and decant the clean water from the top two thirds of the reaction tank through the 1 inch ball valve onto the disposable filter media. Once the clean water decanting time is complete. The sludge valve can be opened, allowing the sludge to pass through the 2 inch ball valve. While dewatering the solids on the band filter, the bandfilter needs to be advanced as the solids content increases and the water flow decreases. The dewatered sludge and spent filter media will be deposited into the sludge dump cart and disposed into an approved industrial landfill.

Treating A New Batch

The TT-125 BF manual unit is now ready to begin a new batch. The treatment cycle lasts 30 minutes and treats 100 gallons per batch, for a total of 200 gallons per hour.

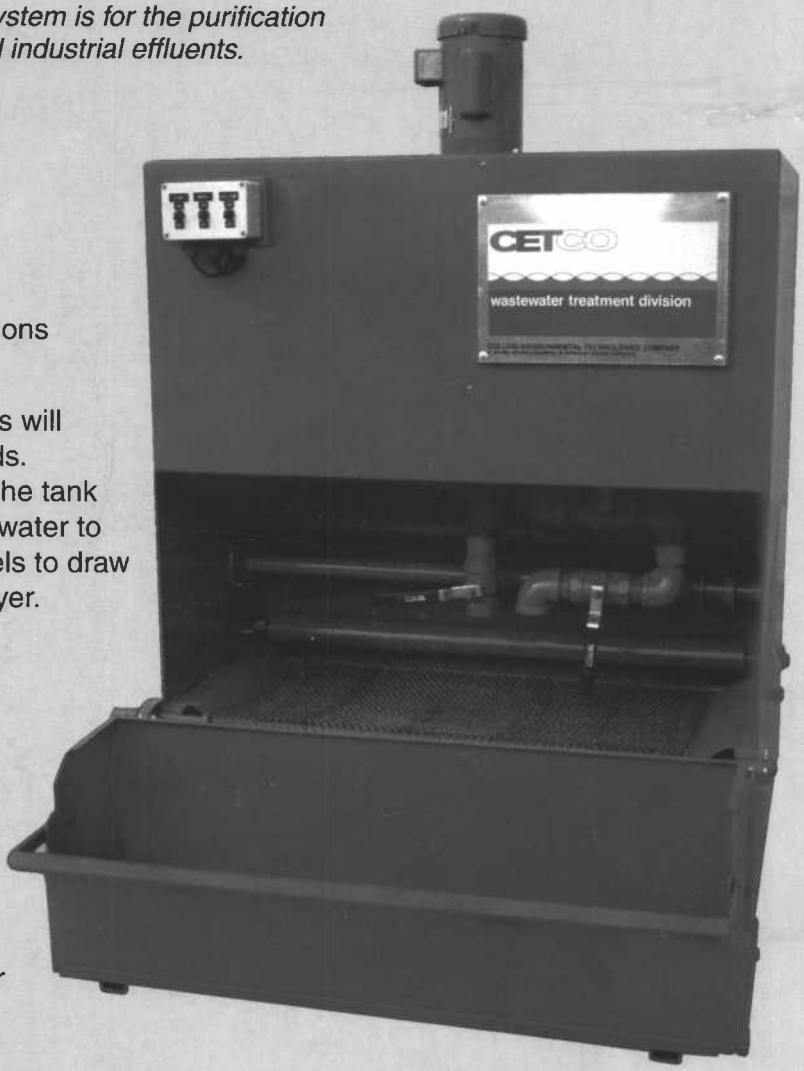
C. Post Discharge

The TT-125 BF unit relies on gravity drainage. If *COMPANY NAME* requires the effluent water to be pumped to the final discharge point, the customer can purchase CETCO's Effluent Sump Pump Option or utilize a 20 gpm or larger sump pump with probes to regulate the water level. A MX-200-L drum filled with activated carbon for final organics reduction is included in the options list for this system.

SYSTEM AC™

TT-125 BF Manual Unit

The TT-125 BF wastewater treatment system is for the purification of spent solutions, emulsions and industrial effluents.



THROUGHPUT CAPACITY:
Maximum of 200 gallons per hour

PRINCIPLE OF OPERATION:
Splitting reaction/adsorption process

REACTION TANK:
Sheet steel trapezoidal reaction tank, capacity 125 gallons

HOLDING TANK:
A 300 gallon rear holding tank is built into the unit. This will allow for pre-separation of floating oils and settled solids. Intake is through a 2 inch port in the side of the unit. The tank is equipped with a submersible pump to transfer wastewater to the reaction tank. The pump can be set at varying levels to draw wastewater from below the oil and above the sludge layer.

MIXER:
1 horsepower, 1725 rpm propeller

CONTROL VALVES:
Clear water valve: 2 inch diameter PVC ball valve
Sludge valve: 2 inch diameter PVC ball valve

BAND FILTER:
The band filter is made of stainless steel and has a conventional weave to support the filter media. The band filter is manually advanced by hand once the filter media becomes laden with sludge.

COLLECTION TANK:
Filtrate collection tank is located underneath the filter pan. The tank has a 2 inch, female threaded discharge line.

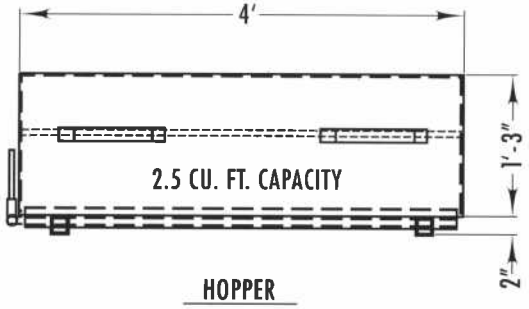
ELECTRICAL EQUIPMENT:
The drive motor for the high speed mixer, as well as the sludge pump is operated by 115 volt single phase current. It is wired ready for operation. All components are U.L. approved.

DIMENSIONS AND WEIGHT:

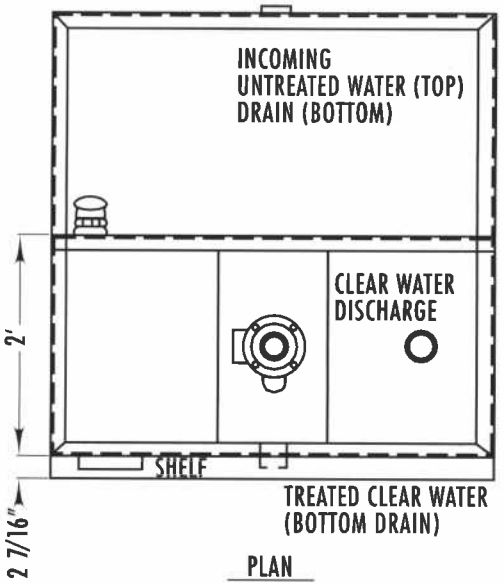
Length:	4 ft. $5\frac{5}{16}$ in.
Width:	4 ft. $7\frac{7}{8}$ in
Height:	6 ft.
Weight:	1,100 lbs.

CUSTOM DESIGNED EQUIPMENT AVAILABLE TO MEET YOUR NEEDS

CETCO
COLLOID ENVIRONMENTAL TECHNOLOGIES COMPANY
1350 West Shure Drive
Arlington Heights, IL 60004
(708) 392-5800 • Fax (708) 506-6150



HOPPER

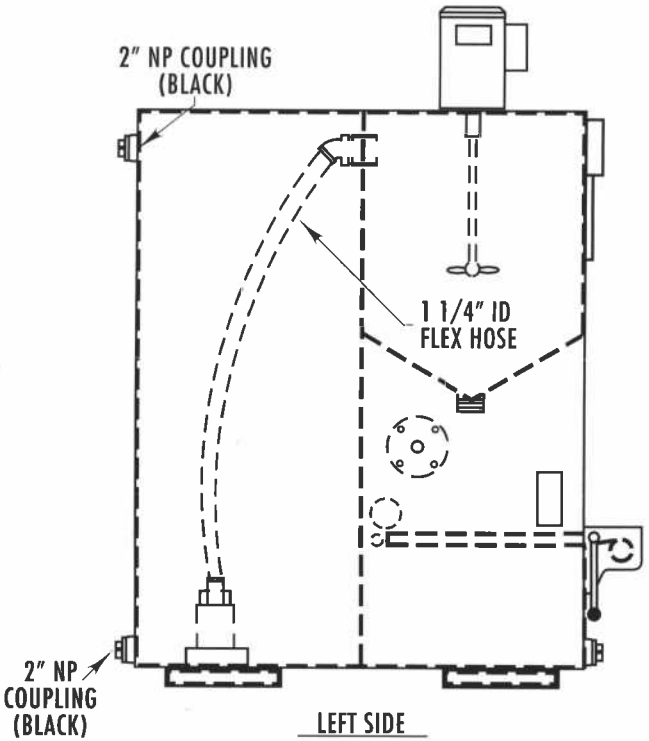


PLAN

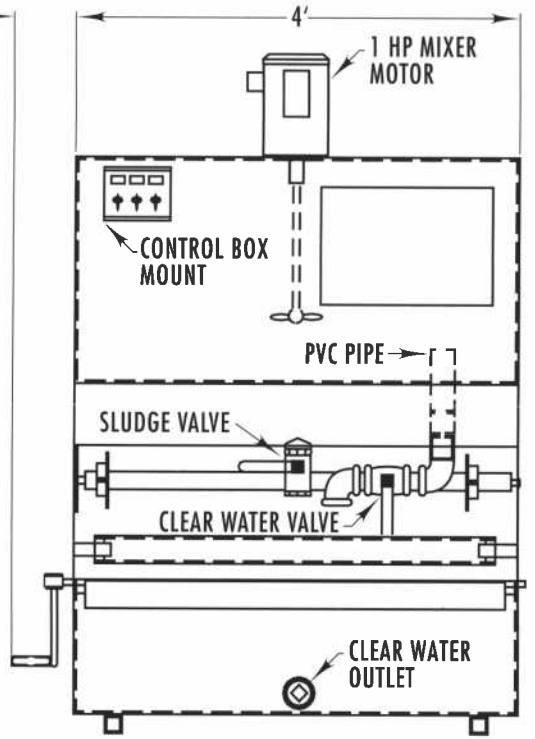
CETCO

COLLOID ENVIRONMENTAL TECHNOLOGIES COMPANY

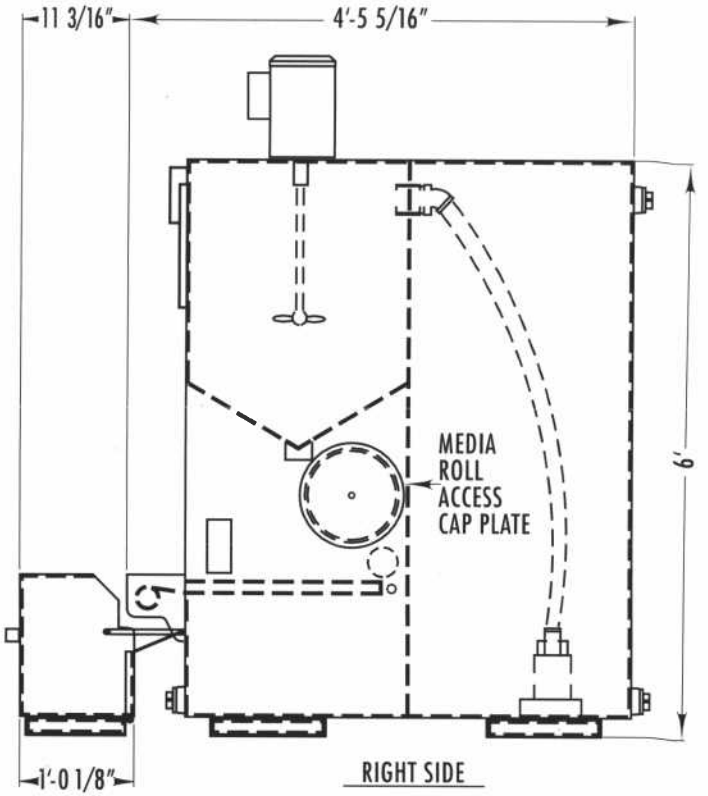
TT–125–BF **WASTEWATER MACHINE**



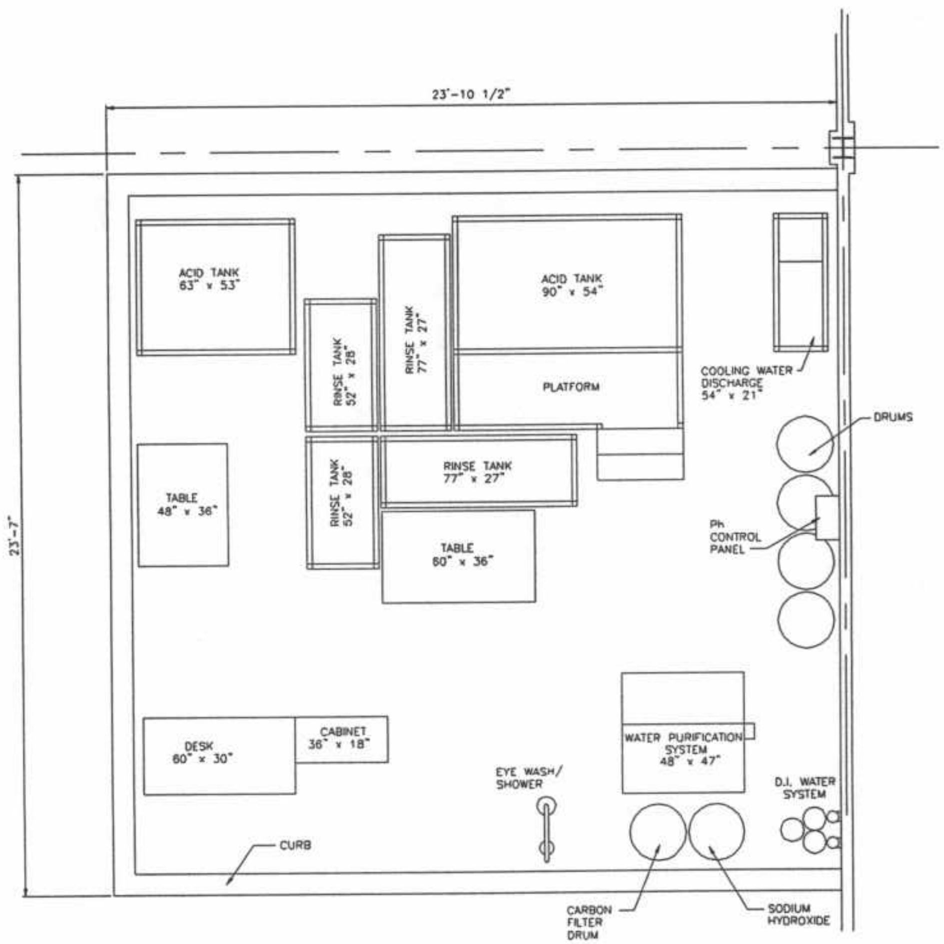
LEFT SIDE



FRONT



RIGHT SIDE



REV	REVISION
SHEET	1/1
TITLE	ELECTROPOLISHING PROCESS AREA
DWG BY	CDR
DATE	6/16/98
DWG NO	D-60025